

**Comments on Draft 1 ENERGY STAR Spec. Ver. 4.0 for PCs  
and  
Energy Star Computer Specification Revision Stakeholder Meeting (2/15/06)  
Action Items**

- Action Items:

Low Power Modes:

EPA:	Manufacturers share data with EPA regarding WOL and low power modes to demonstrate that higher allowances should be considered.
FSC:	<p><u>Desktop Computer:</u></p> <p>Standby (Off-Mode):          WoL disabled: We agree with the limit of <math>\leq 2</math> Watt.          WoL enabled: We suggest a limit of <math>&lt; 3.5</math> Watt consistent with the new requirements of German Ecolabel „Blue Angel – RAL UZ78“ (valid from January 1<sup>st</sup>, 2007).</p> <p>Sleep Mode:          WoL disabled: We propose a limit of <math>\leq 4</math> Watt consistent with the “EU- Ecolabel” and the new “Nordic Swan” and “Blue Angel” requirements.          WoL enabled: We recommend a limit of <math>\leq 5</math> Watt.</p> <p>Idle State:          Recommendation not possible. On the one hand isn’t an “Energy Star compliant” internal Power Supply (80+) available. On the other hand it’s depending on the new CPU generation.</p> <p>Network test procedure:          We support the EPA proposal “Machines need not use the maximum link speed in low-power modes (Sleep and Off)”.</p>

Notebooks:

Standby (Off-Mode):

WoL disabled: We propose a limit of  $\leq 2$  Watt consistent with the “EU- Ecolabel” and the new “Nordic Swan”. With a limit of  $\leq 2$  Watt it is possible to enable some required functionality, e.g. Wake on USB.

WoL enabled: We propose that this will not become a shipment requirement for mobile devices. WoL is disabled for saving battery power. According to in house measurements notebooks have about 1.5 Watt more power consumption with WoL enabled than disabled. Therefore we propose the same limit for both Desktop PCs and notebooks ( $\leq 3.5$ W).

Sleep mode:

WoL disabled: The limit for both Desktop PCs and notebooks should be the same ( $\leq 4$  Watt).

WoL enabled: We propose that this will not become a shipment requirement for mobile devices. WoL is disabled for saving battery power. According to in house measurements notebooks have about 1 Watt more power consumption with WoL enabled than disabled. Therefore we propose the same limit for both Desktop PCs and notebooks ( $\leq 5$ W).

Idle mode:

WoL disabled: We can't agree with the limit of  $\leq 21$  Watt. Following table contains actually measurements from different business notebooks. The limit of 21 Watt is only reachable with “small size notebooks”.

NB	1	2	3	4 <sup>*)</sup>	5	6	7	8	8	10	11	12
On Idle (W)	28	32	38	44	32	18	15	28	22	22	24	30
Display square (“)	15	15	15.4	15	15	8.9	10.6	14.1	14	13.3	15.1	15.1

\*) high end performance mobile Workstation

We recommend considering notebooks with a display square of 15”. Therefore we believe a limit of  $\leq 30$  W is acceptable.

WoL enabled: Notebooks have about 2 Watt more power consumption with WoL enabled than disabled. We suggest a limit of  $\leq 32$  W.

- Draft 1 ENERGY STAR Spec. Ver. 4.0 for PCs

Internal Power Supply

EPA:	80% minimum efficiency at 20%, 50%, and 100% of rated output																																
FSC:	<p>We would like to propose the following interim step to support the July 1<sup>st</sup>, 2007 date as we continue to work toward 80% for Tier II.</p> <p>70% efficiency at 20%</p> <p>75% efficiency at 50%</p> <p>75% efficiency at 100%</p> <p>The above efficiency values are the same as the new requirements of German Ecolabel „Blue Angel – RAL UZ78“.</p> <p>Following chart contains actually efficiency measurements of different internal power supplies.</p> <div data-bbox="311 1164 1453 1729" data-label="Figure"> <table border="1"> <caption>Efficiency at 230V/50Hz</caption> <thead> <tr> <th>Power Supply</th> <th>20% Load</th> <th>50% Load</th> <th>100% Load</th> </tr> </thead> <tbody> <tr> <td>PS 1</td> <td>70.0%</td> <td>76.0%</td> <td>74.5%</td> </tr> <tr> <td>PS 2</td> <td>64.0%</td> <td>73.5%</td> <td>73.5%</td> </tr> <tr> <td>PS 3</td> <td>68.5%</td> <td>75.5%</td> <td>74.5%</td> </tr> <tr> <td>PS 4</td> <td>68.0%</td> <td>76.0%</td> <td>77.0%</td> </tr> <tr> <td>PS 5</td> <td>68.5%</td> <td>75.5%</td> <td>74.5%</td> </tr> <tr> <td>PS 6</td> <td>68.0%</td> <td>75.5%</td> <td>74.5%</td> </tr> <tr> <td>PS 7</td> <td>68.5%</td> <td>75.5%</td> <td>74.5%</td> </tr> </tbody> </table> </div>	Power Supply	20% Load	50% Load	100% Load	PS 1	70.0%	76.0%	74.5%	PS 2	64.0%	73.5%	73.5%	PS 3	68.5%	75.5%	74.5%	PS 4	68.0%	76.0%	77.0%	PS 5	68.5%	75.5%	74.5%	PS 6	68.0%	75.5%	74.5%	PS 7	68.5%	75.5%	74.5%
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